Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An endoscope system comprising:

an endoscope having an insertion tube;

a main light source;

an auxiliary light source comprising a white LED; and

a fiber-optic light guide provided in said insertion tube, said fiber-optic light guide being provided with an incident end face which selectively faces one of said main light source and said auxiliary light source, and an exit end face which faces an illuminating optical system provided at a distal end of said insertion tube, said incident end face of the fiber-optic light guide normally facing said main light source and facing said auxiliary light source in the event of failure of said main light source,

wherein said auxiliary light source is movable between a retracted position where said auxiliary light source is spaced from a position at which said auxiliary light source faces said incident end face of said fiber-optic light guide, and an operating position where said auxiliary light source faces said incident end face of said fiber-optic light guide, said auxiliary light source remaining in said retracted position when said main light source is ON and moving to said operating position in the event of failure of said main light source,

wherein a positive lens is positioned in front of said white LED so that said positive lens is positioned between said white LED and said incident end face of said fiber-optic light guide when said white LED is in said operating position, and in which light rays

emitted from said white LED are converged through said positive lens to be incident on said incident end face of said fiber-optic light guide, such that an optical axis of said white LED is coincident with both an optical axis of said positive lens and an axis of said fiber-optic light guide when said white LED is in said operating position, and

wherein the following relationships are satisfied:

$r_1 \geqq b \times \tan\theta_1$

~~$(a-c)\tan\theta_1 = r_2$~~ $(a-c)\tan\theta_2 = r_2$

$\theta_3 \geqq \theta_2$

wherein "a" designates the image distance of said positive lens;

"b" designates the object distance of said positive lens;

"c" designates the distance between a principle plane of said positive lens and said incident end face of said fiber-optic light guide;

"r_1" designates the radius of said positive lens ;

"r_2" designates the radius of said incident end face of said fiber-optic light guide;

"θ_1" designates the exit angle of said light rays emitted from said white LED;

"θ_2" designates the angle of incidence of light rays which emerge from said positive lens to be incident on said incident end face of said fiber-optic light guide; and

"θ_3" designates the threshold angle of incidence of light rays on said incident end face which are transmittable through said fiber-optic light guide.

2-4. (canceled)

5. (previously presented) The endoscope system according to claim 1, wherein a front focus of said positive lens is coincident with a point of light emission of said white LED.

6. (canceled)

7. (previously presented) The endoscope system according to claim 1, wherein an effective aperture of said positive lens is equal to a diameter of said incident end surface of said fiber-optic light guide; and

wherein a front focus of said positive lens is coincident with a point of light emission of said white LED.

8. (previously presented) The endoscope system according to claim 1, further comprising a video processor in which said main light source and said auxiliary light source are provided.

9. (original) The endoscope system according to claim 8, wherein said video processor comprises a moving device for moving said white LED between said retracted position and said operating position.

10. (currently amended) An endoscope system comprising:

an endoscope having an insertion tube; and

a lighting system having a main lamp and a white LED serving as an auxiliary lamp,

wherein said endoscope includes a fiber-optic light guide provided in said insertion tube, an incident end face of said fiber-optic light guide normally facing said main lamp when a distal end of said insertion tube is plugged into a socket provided on said lighting system,

wherein said lighting system includes a moving device for moving said white LED between a retracted position where said white LED is spaced from a position at which said white LED faces said incident end face of said fiber-optic light guide and an operating position where said white LED faces said incident end face of said fiber-optic light guide,

wherein said white LED remains in said retracted position when said main lamp is ON,

wherein said moving device moves said white LED from said retracted position to said operating position in the event of failure in said main lamp, ~~said white LED being movable between a retracted position where said white LED is spaced from a position at which said white LED faces said incident end face of said fiber-optic light guide, and an operating position where said white LED faces said incident end face of said fiber-optic light guide,~~

wherein a positive lens is positioned in front of said white LED so that said positive lens is positioned between said white LED and said incident end face of said fiber-optic light guide when said white LED is in said operating position, and in which light rays emitted from said white LED are converged through said positive lens to be incident on said incident end face of said fiber-optic light guide, such that an optical axis of said white LED is coincident with both an optical axis of said positive lens and an axis of said fiber-optic light guide when said white LED is in said operating position, and

wherein the following relationships are satisfied:

$r_1 \geqq b \times \tan\theta_1$

~~$(a-c)\tan\theta_1 = r_2$~~ $\underline{(a-c)\tan\theta_2 = r_2}$

$\theta_3 \geqq \theta_2$

wherein "a" designates the image distance of said positive lens;

"b" designates the object distance of said positive lens;

"c" designates the distance between a principle plane of said positive lens and said incident end face of said fiber-optic light guide;

"r_1" designates the radius of said positive lens ;

"r_2" designates the radius of said incident end face of said fiber-optic light guide;

"θ_1" designates the exit angle of said light rays emitted from said white LED;

"θ_2" designates the angle of incidence of light rays which emerge from said positive lens to be incident on said incident end face of said fiber-optic light guide; and

"θ_3" designates the threshold angle of incidence of light rays on said incident end face which are transmittable through said fiber-optic light guide.

11. (original) The endoscope system according to claim 10, wherein said lighting system is incorporated in a video processor.

12. (previously presented) The endoscope system according to claim 10, wherein an effective aperture of said positive lens is equal to a diameter of said incident end surface of said fiber-optic light guide; and

wherein a front focus of said positive lens is coincident with a point of light emission of said white LED.

13. (previously presented) An endoscope system comprising:

an endoscope having an insertion tube;

a main light source;

an auxiliary light source comprising a white LED;

a fiber-optic light guide provided in said insertion tube, said fiber-optic light guide being provided with an incident end face which selectively faces one of said main light source and said auxiliary light source, and an exit end face which faces an illuminating optical system provided at a distal end of said insertion tube,

wherein said auxiliary light source is movable between a retracted position where said auxiliary light source is spaced from a position at which said auxiliary light source faces said incident end face of said fiber-optic light guide, and an operating position where

said auxiliary light source faces said incident end face of said fiber-optic light guide,

wherein a positive lens is positioned in front of said white LED so that said positive lens is positioned between said white LED and said incident end face of said fiber-optic light guide when said white LED is in said operating position, and in which light rays emitted from said white LED are converged through said positive lens to be incident on said incident end face of said fiber-optic light guide, and

wherein the following relationships are satisfied:

$r_1 \geqq b \times \tan\theta_1$

~~$(a-c)\tan\theta_1 = r_2$~~ $(a-c)\tan\theta_2 = r_2$

$\theta_3 \geqq \theta_2$

wherein "a" designates the image distance of said positive lens;

"b" designates the object distance of said positive lens;

"c" designates the distance between a principle plane of said positive lens and said incident end face of said fiber-optic light guide;

"r_1" designates the radius of said positive lens ;

"r_2" designates the radius of said incident end face of said fiber-optic light guide;

"θ_1" designates the exit angle of said light rays emitted from said white LED;

"θ_2" designates the angle of incidence of light rays which emerge from said positive lens to be incident on said incident end face of said fiber-optic light guide; and

"θ_3" designates the threshold angle of incidence of light rays on said incident end face which are transmittable through said fiber-optic light guide.

14. (previously presented) The endoscope system according to claim 13, wherein an effective aperture of said positive lens is equal to a diameter of said incident end

surface of said fiber-optic light guide; and

wherein a front focus of said positive lens is coincident with a point of light emission of said white LED.